

ASME Section VIII Div. 2 2007 Edition, A08 Addenda Implementation for all PRG Programs

- Rigorous Fatigue Option
- Welded Fatigue Curves
- Code Control Form for all Programs and Templates
- Code Updates for WRC 107/297 Calculations

- S_{PS} Replacing $3S_m$
- Updated Fatigue Damage Report Formats
- PRG welded fatigue curves

FE/Pipe v6.0

Screen Format Updating

- Users can change configuration parameters from input.
 - a) Units
 - b) Database block size parameters
 - c) ASME Code defaults
- Output processor is updated to permit tabular or graphical report generation.
- Pipe Size and MatPRO buttons are available from input.
- Ability to start and change jobs from the input file menu.

StressPlot and Plastex Updates

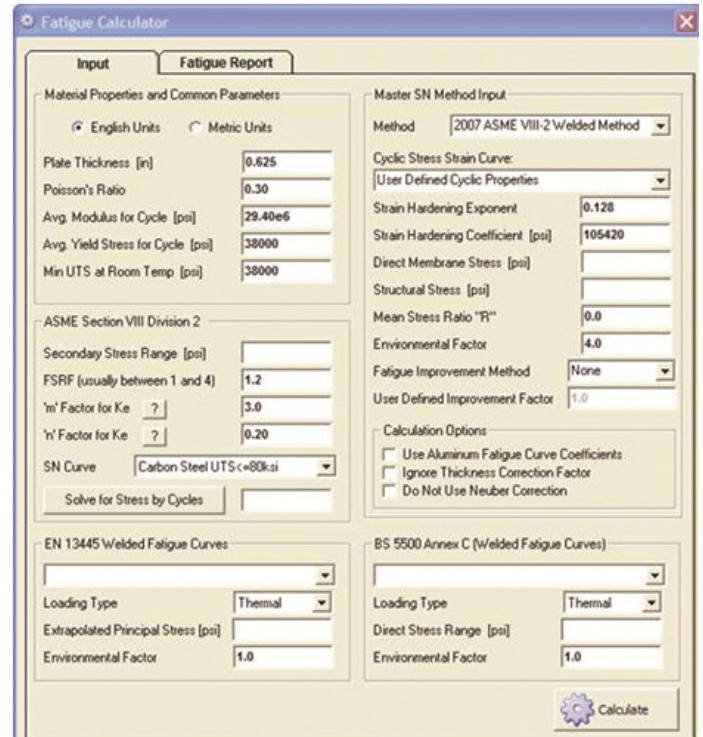
- Stress/PLOT v3.0
 - Various upgrades to support new ASME VIII-2 Part 5 rules
 - Cycle counting tool to evaluate stress results with time-history solutions now includes ASME VIII-2, Annex 5.2 methodologies for cycle counting.
 - Report generating tool to construct tables of linearized stress results
 - General stress input option to allow stress linearization of stress results from general purpose FEA tools
 - Detailed fatigue life calculation tool for ASME VIII-2, BS 5500, and EN-13445
- PlasTEX v3.0
 - Expanded “converged” plot options including plot quantity versus load step
 - New table display option

Template / Design Updates

- Nominal Diameter and Pipe Wall Thickness Lookups
- Pad on bends may be entered assuming bend wall removed due to erosion.
- Automated Stress Classification Lines in Brick Template

Viewer Updates

- Multiple viewer instances allowed
- Translucent option on brightness control
- Multiple color gradient selections from File:Options
- Pipe Labeling
- Control of legend labeling
- Control of trifecta labeling



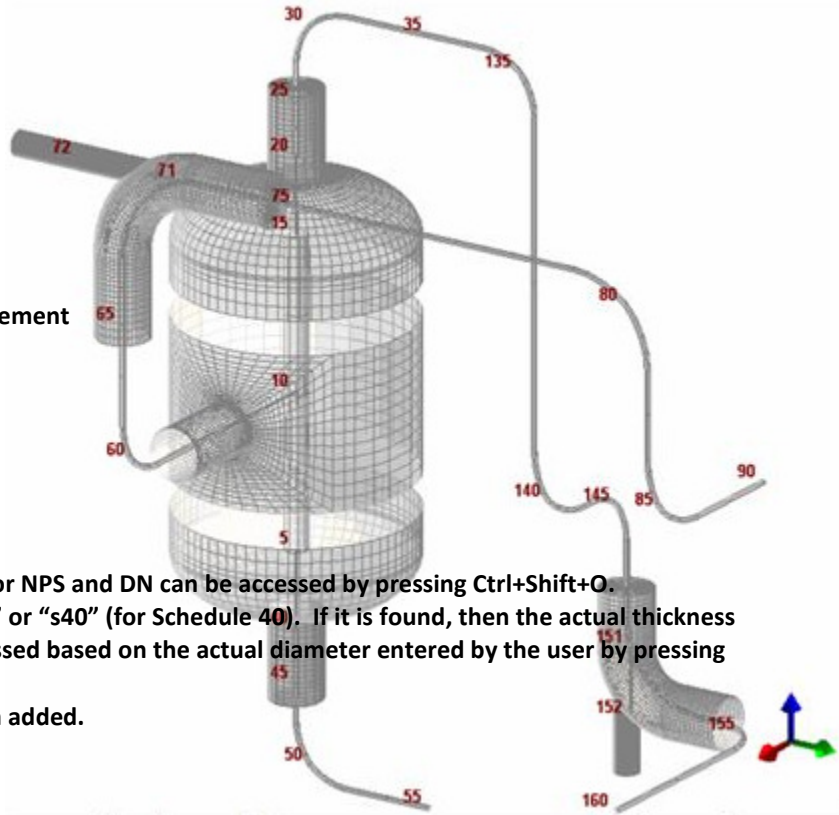
Miscellaneous

- Option to change job names or select new templates from the input processor
- User may change database parameters from the input processor.
- User may change units from the input processor.
- FE/Pipe Batch Job Processor (V2.0a)

Updated Output Report Writer

- Generate plots directly from the report screen.
- Report screen converts directly to text or notepad.
- Improved fonts, editing and find features

PCL-Gold v3.1



PCL-Gold v3.1

- Speed and Microsoft® Office Excel Interface Improvement
- Output Interaction in Excel
- Updated Rotating Equipment Module
- Updated Wind Load Module
- Updated Seismic Load Module

New Analysis Capability

- NPS and DN Outer diameters are allowed. Tables for NPS and DN can be accessed by pressing Ctrl+Shift+O.
- Schedule thicknesses are allowed by entering "STD" or "s40" (for Schedule 40). If it is found, then the actual thickness will be entered. Tables for thicknesses can be accessed based on the actual diameter entered by the user by pressing Ctrl+T.
- New ASME Section VIII Div 2 preferences have been added.

Data Input Features

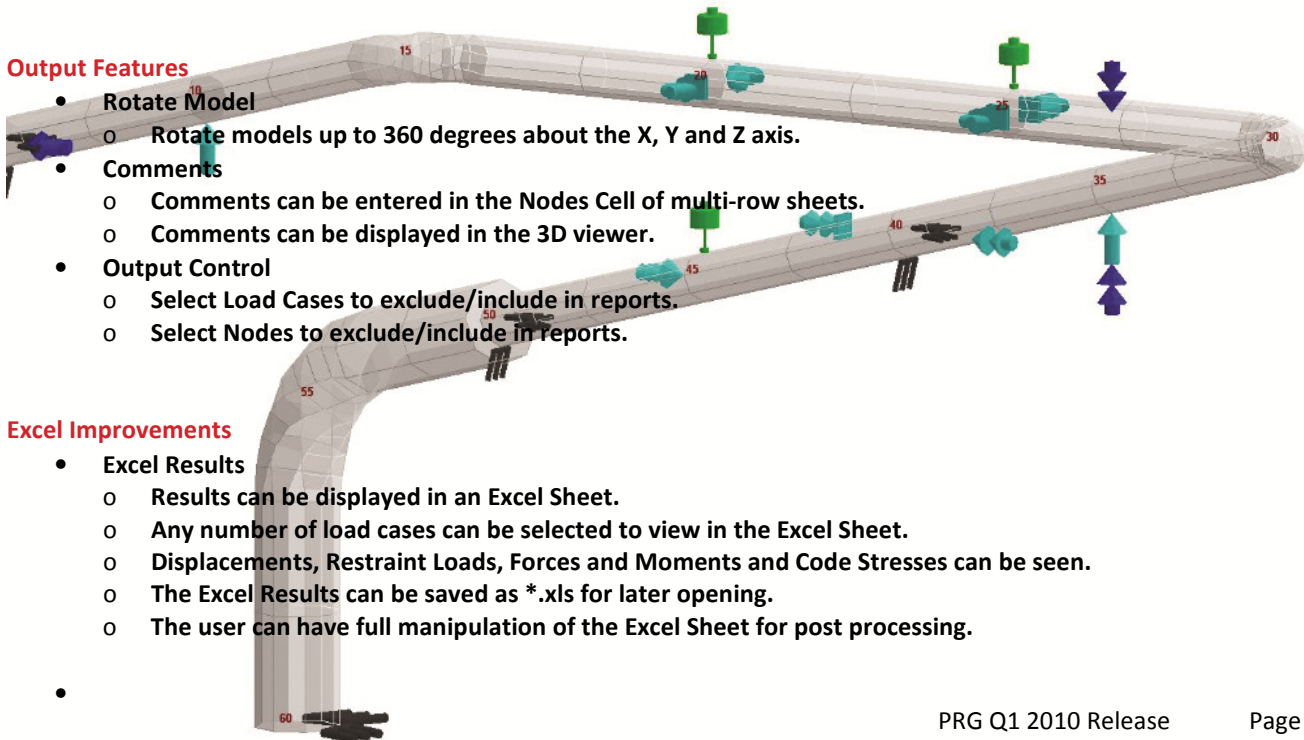
- Copy/ Mirror Model
 - Copy section of a model and mirror them in XY, XZ and YZ plane.
- Automatic Unit Conversion
 - Units are automatically converted from English to Metric and vice-versa by a click of a button.
- Use FE/Pipe Editor
 - Export piping files as child models for later use in FE/Pipe.
 - Import FE/Pipe models as child models for structures.
- File Management
 - Files may be opened by double clicking the input file; a new instance of the piping software will be opened.
 - Recently used files feature in the "Open" button.

Output Features

- Rotate Model
 - Rotate models up to 360 degrees about the X, Y and Z axis.
- Comments
 - Comments can be entered in the Nodes Cell of multi-row sheets.
 - Comments can be displayed in the 3D viewer.
- Output Control
 - Select Load Cases to exclude/include in reports.
 - Select Nodes to exclude/include in reports.

Excel Improvements

- Excel Results
 - Results can be displayed in an Excel Sheet.
 - Any number of load cases can be selected to view in the Excel Sheet.
 - Displacements, Restraint Loads, Forces and Moments and Code Stresses can be seen.
 - The Excel Results can be saved as *.xls for later opening.
 - The user can have full manipulation of the Excel Sheet for post processing.

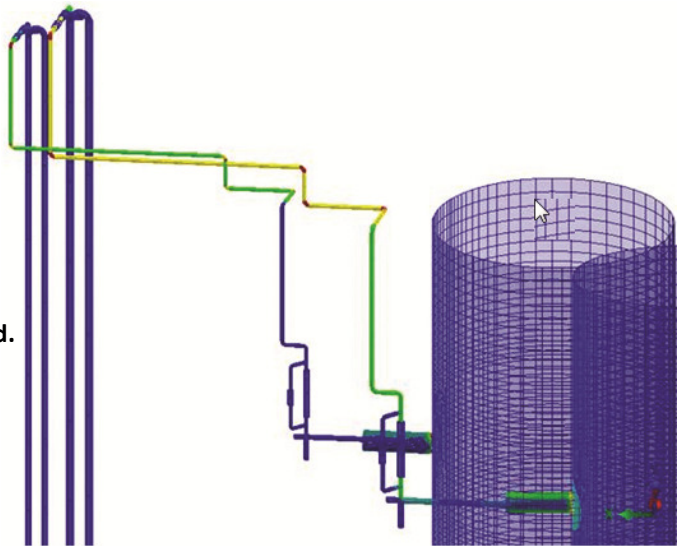


Data Manipulation

- Input Duplication
 1. Columns with blue font are duplicated; the value from above will be carried down for simplicity.
 2. Disabling the feature will leave only the changed values; the rest will remain as blank.
- Autofit and Borders
 1. Autofitting the cells can be done by pressing the Auto Fit button or right click and autofit.
 2. Border can be redrawn after inserting or deleting a row.
- Hide/Show Columns
 1. The user may dynamically hide and show columns with the right click options.
- Data Lists can be seen by right clicking. This will show data from the multi row sheets, which is helpful when a large number of elements and restraints are found in the model.
- Checkboxes to disable Pressure, Temperature, Densities, External Forces and movement for run purposes

Links to other PRG Products

- MatPRO Link
 - Import Material Properties for B31 and ASME Tables.
 - High Temperature Calculations
 - Fatigue Calculations
- NozzlePRO Link
 - Open and modify Finite Element models in NozzlePRO.
 - Heads and Intersections
- FEBend Link
 - Open and modify Finite Element bend models in FEBend.
 - Bends only and Bends with Supports
- Quick Link to Program Manual
 - Right Click option to link to manual
 - Pressing F1 on the Excel Sheet
 - Pressing the Help button



Trouble-Shooting / Support

- Email Support
 - Right click option to directly email support@paulin.com
- Error Messages
 - Error messages link to cell with error.

"PCL 3.1" - Piping3.1(03).xls													
B4													
Plot Run New Open... Save Save As Structure Results Errors Units Auto Fit Settings Utilities FEA Materials Help													
Pages	Node List	Bend	Vectors			Element Properties				General Properties			
Border	Nodes <or> Comments	Bend Tangent Nodes	dx,dy,dz (in.) Start -> Middle	dx,dy,dz (in.) Middle -> End	Pipe OD (in.) Wind U(in.)	Thickness (Pipe, Insul, Cor, Ref,m)	Radius (Bends only) (in.)	Rigid Element Weight (lb.)	Temperature (Deg. F)	Pressure (lb./sq.in.)	Uniform Load (Ux,Uy,Uz)	Density (Pipe, Fluid, Insul, Ref)	Properties (E, poisson's, alpha)
1	1											0.283	29.5E6 0.3 6.5E-6
2	2												
3	3												
4	4												
5	5												
6	6												
7	7												
8	8												
9	9												
10	10												

the pro series

ASME Section VIII Div. 2 2007 Edition, A08 Addenda

NozzlePRO v8.0

- **New ASME preferences menu options to control ASME VIII-2 solutions**
- **Long file names are allowed, including spaces.**

AxiPRO v3.0

- **New option to define width of pressure distribution across gasket surface**
- **Incremental bolt load analysis options to evaluate several bolt loads for a given flange geometry**
- **Added new ASME preferences menu options to control code compliance reports and solutions.**
- **AxiPRO improvements for large diameter metric flanges**
- **Batch processing capability**

MatPRO v3.0

- **Update to A08 Code Addenda**
- **Detailed fatigue life calculation tool for ASME VIII-2, BS 5500, and EN-13445**

MeshPRO v3.5

- **Upgraded for AutoCAD 2010 support (2000 and 2005 editions still supported).**
- **Stress and joining region capabilities for shell models**
- **3D hexahedral volumetric meshing with surface guiding**
- **3D hexahedral volumetric sweep meshing tool**
- **3D element and mesh improvement tools.**

Fitness for Service

- **Fitness for Service is an additional module which can be added to NozzlePRO. Fitness for Service module must be purchased separately in conjunction with MatPRO.**

the FE series

FE107 v2.0 & FESIF v2.0

- **New ASME preferences menu options to control ASME VIII-2 solutions**

FE661 v1.2 & FEBend v1.2

- **Long file names are allowed, including spaces.**
- **Double Clicking input file will open and populate FEBend Screen.**
- **Added Density field entry for material properties.**
- **New ASME Section VIII Div 2 preferences have been added.**